



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/855,904

05/15/2001

Jong-Ho Kim

A34239

1155

21003

7590

03/28/2005

BAKER & BOTTS
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

NGUYEN, STEVEN H D

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/855,904	Applicant(s) KIM, JONG-HO	
	Examiner Steven HD Nguyen	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/15/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antonio (US 20020064142) in view of Williams (USP 6219562).

Regarding claim 1, Antonio discloses a base transceiver station (Fig 1, Ref 12) in a mobile communication system comprising a GPS time frequency unit for outputting a synchronized time which is received from at least one GPS satellite and frequency information (Page 4, Sec 37, GPS interface); an ATM interface unit for interfacing with an asynchronous mode communication device (Page 3, Sec 31 and Sec 41, ATM interface); a packet routing unit for providing routing information used for setting path of packet data (Fig 4, Ref 64 is a router module for setup and routing the packet to ATM interface); a multi-rate channel unit for processing an inter-channel communication, each channel having a different data rate (Fig 5, Ref 102 and 108 for decoding the wireless signals and encoding wire-line signals such wireless channel has different rate than wire-line channel); a signal transformation unit for transforming

Art Unit: 2665

and modulation/demodulation of an input signal (Fig 7, Ref 124 and 118 for using upconversion and downconversion for demodulating/modulating); and a wireless unit for wireless communication with a mobile station (Fig 5, Ref Antenna). However, Antonio fails to disclose a BTS main processing unit for generating a control command to control one BTS. In the same field of endeavor, Williams discloses a base transceiver station (Fig 1) in a mobile communication system comprising a GPS time frequency unit for outputting a synchronized time which is received from at least one GPS satellite and frequency information (Fig 1, Ref 46, col. 6, lines 59-63) and a BTS main processing unit for generating a control command to control one BTS (Fig 1, Ref 38 and col. 6, lines 50-58).

Since, Williams suggests that the central processing unit for performing the control function can place at the BSC or BSS. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to implement a CPU at a BTS as disclosed by Williams's system into Antonio's system. The motivation would have been to reduce the time of processing softer handoff.

Regarding claim 2, Antonio discloses the wireless unit includes three transmitting frequency units and three receiving frequency units (Fig3, Ref 46).

Regarding claim 3, Antonio discloses upconversion and downconversion. However, Antonio fails to fully disclose the signal transformation unit includes analog up/down converter and digital up or down converter. However, the examiner takes an official notices that a method and advantage of using analog up/down converter and digital up or down converter are well known an expected in the art at the time of invention was made to implement these devices into Antonio's system in order to transform the signals.

Art Unit: 2665

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Antonio and Williams as applied to claim 1 above, and further in view of Button (USP 5872823).

Regarding claim 4, Antonio discloses the multi-rate channel unit includes a transmitting integrated circuit for processing an input signal, a receiving integrated circuit for processing an output signal (Fig 5, Ref 114 and Fig 7, Ref 126 are ASICs). However, Antonio and Williams fail to disclose a HDLC controller for controlling a HDLC communication and a controlling software block for performing a pre-reserved program and transmit it to each device. In the same field of endeavor, Sutton discloses the ASICs for processing the signals (Fig 2, Ref 218 and 220) into HDLC frame and a controller (Fig 2, Ref 105), See col. 6, lines 19-36 and controlling software block for performing a pre-reserved program and transmit it to each device (it is well known in the art to use a storage for storing the software and loading the software into the ASICs).

Since, Antonio suggests the use of FIRM for coupling to the router bus. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to implement HDLC adapter between the channel processing module with the router using a HDLC adapter as disclosed by Sutton's system into the system of Antonio and Williams. The motivation would have been to prevent corrupting the data or clock signals.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8-5.

Art Unit: 2665

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, consisting of stylized, overlapping loops and a long horizontal stroke extending to the right.

Steven HD Nguyen
Primary Examiner
Art Unit 2665
3/14/05